

AMENDMENTS TO THE ABSTRACT:

Please replace the Abstract with the following amended abstract:

ABSTRACT

It is disclosed a method of measuring the thickness and/or the depletion of Al and Cr of a γ/γ' MCrAlY-coating after the use in a high temperature environment, the γ/γ' MCrAlY-coating (6) exhibiting a non-equilibrium γ/γ' -microstructure at a temperature lower than the temperature during operation. Before the coating (6) conductivity by means of a multifrequency eddy current system is measured a heat treatment is applied to transform the non-equilibrium γ/γ' -microstructure to a equilibrium microstructure having a α -Cr phase. Subsequently the Al and/or Cr depletion of the coating (6) from the coating conductivity and permeability is determined.

(Fig. 1)